

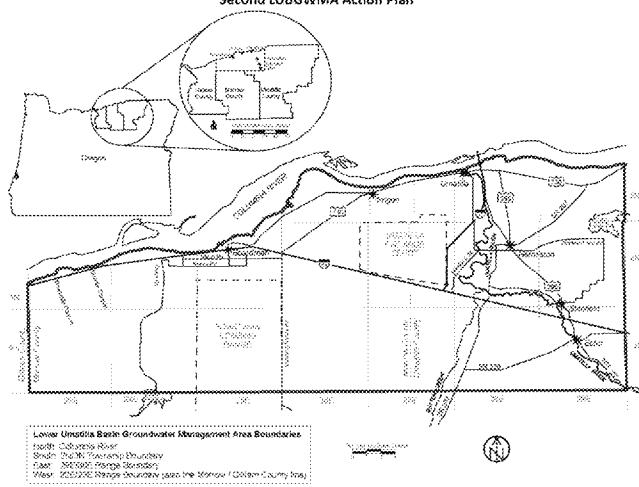
# R10 Umatilla Petition

Figures from Petition Appendices

02 27 2020

# LUBGWMA Second action plan page 9

Figure 2-1  
Location and Boundaries of the Lower Umatilla Basin Groundwater Management Area  
Second LUBGWMA Action Plan

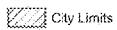


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Figure 2-3

Nitrate Leaching Potential Rating of the Lower Umatilla Basin Groundwater Management Area  
Second LUBGWMA Action Plan

**Legend**



**NRCS Nitrate Leaching Potential Rating**

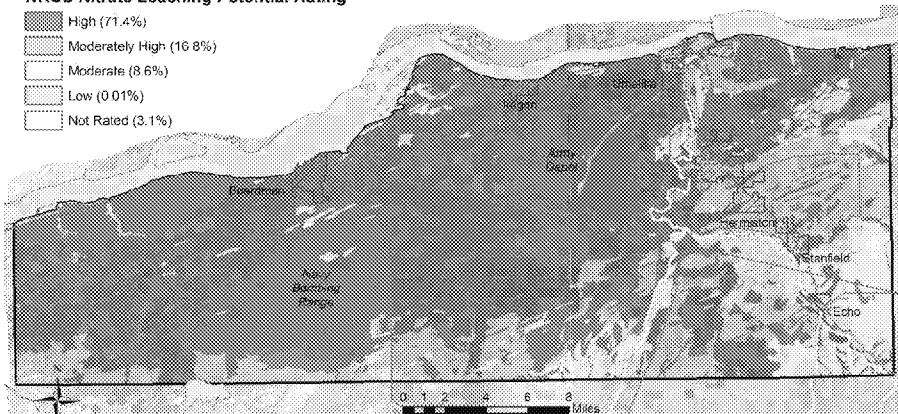
High (71.4%)

Moderately High (16.8%)

Moderate (8.6%)

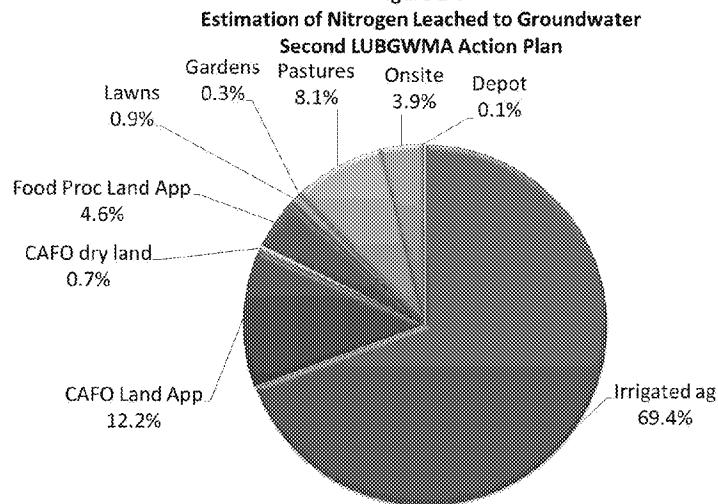
Low (0.01%)

Not Rated (3.1%)



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Figure 2-5



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Figure 2-9

## Fourth Synoptic Sampling Event Nitrate Results

### Second LUBGWMA Action Plan

#### Legend

- less than 3 mg/L (33 wells; 28%)
- 3 to 7 mg/L (25 wells; 20%)
- 7 to 10 mg/L (15 wells; 11%)
- 10 to 20 mg/L (22 wells; 17%)
- 20 to 40 mg/L (19 wells; 14%)
- 40 to 60 mg/L (14 wells; 11%)
- more than 60 mg/L (3 wells; 2%)

44% Exceed 10 mg/L Drinking Water Standard

56% Exceed 7 mg/L GWMA Trigger Level

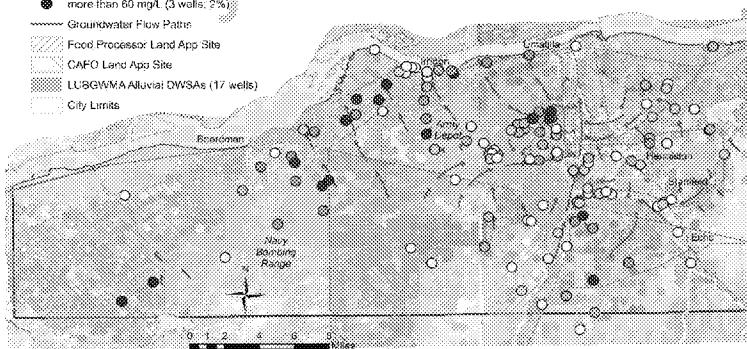
#### Groundwater Flow Pattern

#### Food Processor Land App Site

#### CAFO Land App Site

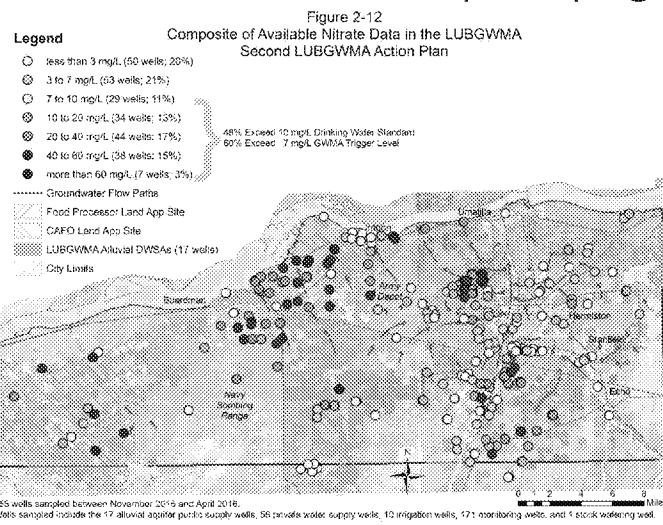
#### LUBGWMA Alluvial DWSAs (17 wells)

#### City Limits



125 wells sampled between November 2015 and April 2016.

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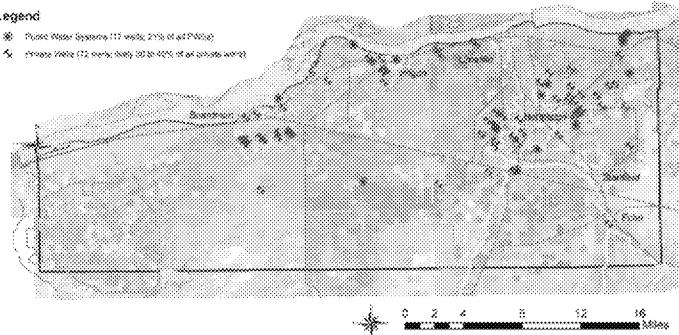


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Public and Private Drinking Water Wells that Have Exceeded the Nitrate Drinking Water Standard  
Lower Umatilla Basin Groundwater Management Area

## Legend

- Public Water Systems (113 wells; 21% of all wells)
- ◆ Private Wells (72 wells; 88.8% of all private wells)



## Notes:

Public wells include both active and inactive Public Water Systems monitored by Oregon Health Authority. Of the 163 wells in Umatilla and Morrow County, 35 (21%) have exceeded the nitrate drinking water standard at least once. 77 of those wells fall under the LUBGWMA. Of the 31 Public in the LUBGWMA, 17 (55%) have exceeded the standard at least once.

Private wells include both active and inactive wells monitored by the Oregon Health Authority. The percentage is calculated for each well which exceeded nitrate levels at least once. Because some private wells are only monitored in the spring season, the percentage of PWS wells with high nitrate may actually appear higher than 21%.

Private wells on 350+ wells exceed 10 mg/l nitrate from the Reed Ridge Treatment Plant, 14 wells from the Negley 1280000A Monitoring wells.

7 active wells are currently indicated as having exceeded the nitrate standard. Approximately 17% of the PWS wells show nitrate values over the standard. Because the PWS database is incomplete it is impossible to calculate accurate and meaningful numbers.

It is likely not a good indicator of the magnitude or extent of excess contamination. Approximately 42% of the domestic wells in the LUBGWMA exceed nitrate values over the standard. Approximately 30% of the domestic wells exceeded during the 2003 Severe Drought Event nitrate values over the standard.